190

101 PROCESSOR	102 VOLATILE MEMORY	103 NON-VOLATILE MEMORY	104 DATA STORAGE UNIT

100

108 INPUT/OUTPUT DEVICE	106 OPTIONAL ALPHA- NUMERIC INPUT DEVICE	107 OPTIONAL CURSOR CONTROL DEVICE	105 OPTIONAL DISPLAY DEVICE

200
NETWORK

Figure 1

200

(CLIENT) COMPUTER SYSTEM 190a

INTERNET (or INTRANET) 210

(SERVER) COMPUTER SYSTEM 190c

Figure 2

300

| | 305
TRAINING DATA SET (COMPLETE RECORD) |

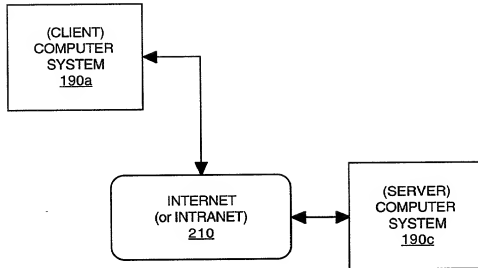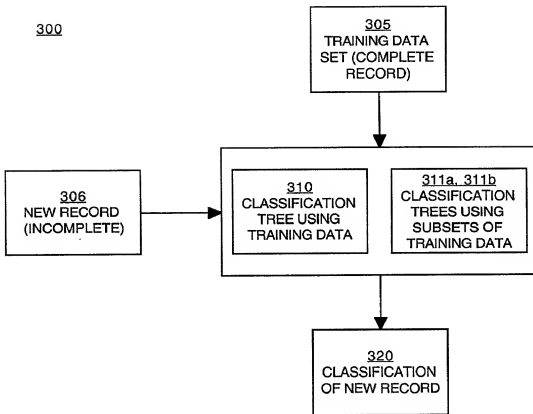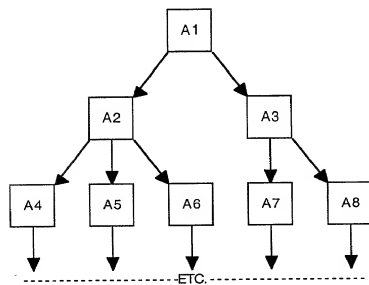| 306
NEW RECORD (INCOMPLETE) | → | 310
CLASSIFICATION TREE USING TRAINING DATA | 311a, 311b
CLASSIFICATION TREES USING SUBSETS OF TRAINING DATA |

| 320
CLASSIFICATION OF NEW RECORD |

Figure 3

TRAINING DATA = [A1, A2, A3,..., An]

310

SUBSET OF TRAINING DATA = [A1, A3,..., An]

311a

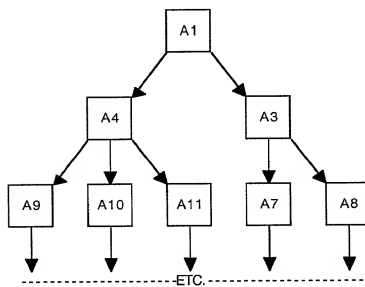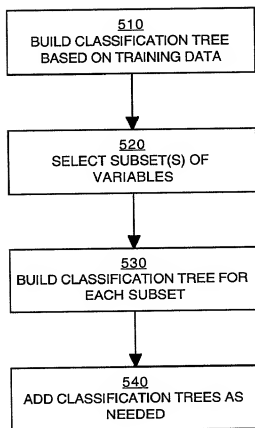Figure 4

500

510 BUILD CLASSIFICATION TREE BASED ON TRAINING DATA

520 SELECT SUBSET(S) OF VARIABLES

530 BUILD CLASSIFICATION TREE FOR EACH SUBSET

540 ADD CLASSIFICATION TREES AS NEEDED

Figure 5

600


```
                    ┌─────────────────────┐
              ┌────▶│        610          │
              │     │   RECEIVE RECORD    │
              │     └─────────────────────┘
              │                │
              │                ▼
              │     ┌─────────────────────┐
              │     │        620          │
              │     │ APPLY FIRST         │
              │     │ CLASSIFICATION      │
              │     │ TREE TO RECORD      │
              │     └─────────────────────┘
              │                │
              │                ▼
              │            ╱────────╲
              │          ╱    630     ╲
              │    ┌───▶ ╲  ANY MISSING ╱ ──── NO ──┐
              │    │      ╲ INFORMATION ╱            │
              │    │        ╲ NEEDED? ╱              │
              │    │          ╲────╱                 │
              │    │            │                    │
              │    │           YES                   │
              │    │            ▼                    │
              │    │  ┌─────────────────────┐        │
              │    │  │        640          │        │
              │    └──│ APPLY ANOTHER       │        │
              │       │ CLASSIFICATION      │        │
              │       │ TREE TO RECORD      │        │
              │       └─────────────────────┘        │
              │                                       │
              │       ┌─────────────────────┐        │
              │       │        650          │◀───────┘
              │       │  RECORD CLASSIFIED  │
              │       └─────────────────────┘
              │                │
              │                ▼
              │       ┌─────────────────────┐
              │       │        660          │
              │       │ SELECT CONTENT      │
              │       │ TARGETED BY         │
              │       │ CLASSIFICATION      │
              │       └─────────────────────┘
              │                │
              └──── NEXT RECORD ─────┘
```

Figure 6